Applicant: Penmetcha Kumar et al. Attorney's Docket No.: 11283-020US1 / PH-933PCT-

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## Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

## **Listing of Claims:**

- 1. (Original) A modulate aptamer being an aptamer constituted by two complementary oligonucleotide chains, which forms a conjugate and stabilizes only in the presence of a target protein.
- 2. (Original) The modulate aptamer according to claim 1, wherein one or both of the two oligonucleotide chains is radioactively or non-radioactively labeled.
- 3. (Original) The modulate aptamer according to claim 1, wherein one of the oligonucleotide chains constituting the modulate aptamer has intramolecularly, mutually complementary sequences of four or more consecutive nucleotides and has a stem-loop structure in the absence of a target protein.
- 4. (Original) The modulate aptamer according to claim 3, wherein a fluorescent substance is bound to the 5' or 3'-end of the oligonucleotide of the stem-loop structure, and a quencher substance for the fluorescent substance is bound to the 3' or 5' end thereof, respectively.
- 5. (Previously Presented) The modulate aptamer according to claim 1, wherein the target protein is HIV-1 Tat protein and/or a fragment thereof.

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6. (Original) The modulate aptamer according to claim 5, which comprises the nucleotide sequence represented by the following secondary structure (I):

$$3' - N^{\epsilon_2} - N^{\epsilon_5} - 5'$$
 $C - G$ 
 $N^{\epsilon_5} - N^{\epsilon_5}$ 
 $C - G$ 
 $U - A$ 
 $A - U$ 
 $G - C$ 
 $N^3$ 
 $U$ 
 $N^{\epsilon_5} - N^{\epsilon_5}$ 
 $U - A$ 
 $A - U$ 
 $G - C$ 
 $S' - N^{\epsilon_5} - N^{\epsilon_5}$ 
 $U - A$ 
 $U - C$ 
 $U -$ 

(In the structure, N1a and N1b represent at least 1 pair of nucleobases capable of complementary base pair formation; N2a and N2b represent at least 1 pair of nucleobases capable of complementary base pair formation; N3 and N4 each independently represent 1 or 2 nucleobases; N5a and N5b represent at least 1 pair of nucleobases capable of complementary base pair formation; N6a and N6b represent at least 1 pair of nucleobases capable of complementary base pair formation; and solid lines represent hydrogen bonds between nucleobases.)

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7. (Currently Amended) The modulate aptamer according to claim 6, which comprises the nucleotide sequence represented by the following secondary structure (SEQ ID NOs:9 (left) and 13 (right)):

(In the structure, solid lines represent hydrogen bonds between nucleobases.)

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8. (Currently Amended) The modulate aptamer according to claim 3, wherein one of the oligonucleotide chains constituting the modulate aptamer has a nucleotide sequence represented by the following secondary structure (III) (SEQ ID NO:20):

(In the structure, solid lines represent hydrogen bonds between nucleobases.)

- 9. (Original) A method of detecting a target protein, which comprises radioactively or non-radioactively labeling one oligonucleotide chain of the modulate aptamer according to claim 1, and detecting the presence and/or amount of the target protein with a conjugate formed in the presence of the target protein as an indicator.
- 10. (Original) A method of detecting a target protein, which comprises immobilizing one oligonucleotide chain of the modulate aptamer according to claim 1 on a support, and detecting the presence and/or amount of a target protein with a conjugate formed by addition of the other oligonucleotide labeled radioactively or non-radioactively as an indicator.
- 11. (Original) The method according to claim 9 or 10, wherein the oligonucleotide chain of the stem-loop structure according to claim 4 is used as the oligonucleotide chain labeled.

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12. (Previously Presented) The method according to claim 10, wherein the immobilization is by specific binding between avidin or streptoavidin and biotin.

- 13. (Original) The method according to claim 9 or 10, wherein the non-radioactive label is fluorescein and the conjugate is detected by the fluorescent signal thereof.
- 14. (Previously Presented) The method according to claim 9 or 10, wherein the target protein is an HIV-1 Tat protein and/or a fragment thereof.
- 15. (Original) A kit for detecting a target protein, which comprises the following (a) to (c):
  - (a) a support,
  - (b) one of the oligonucleotide chains of the modulate aptamer according to claim 1 to be immobilized on the support,
  - (c) the other oligonucleotide chain which is radioactively or non-radioactively labeled and forms a conjugate in the presence of a target protein.
- 16. (Original) The kit for detecting a target protein according to claim 15, wherein the target protein is an HIV-1 Tat protein and/or a fragment thereof.
- 17. (Original) The kit for detecting a target protein according to claim 15, wherein one of the oligonucleotide chain (b) is the 5'-chain or 3'-chain of the modulate aptamer according to claim 6 or 7, and the other oligonucleotide chain (c) is the 3'-chain or 5'chain, respectively.
- 18. (Original) The kit for detecting a target protein according to claim 15 or 16, wherein the oligonucleotide chain of the stem-loop structure according to claim 4 is used as the labeled oligonucleotide chain.